



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/086,167	02/28/2002	Subin George	5681-09700	2661

7590 01/25/2005

Robert C. Kowert
Conley, Rose, & Tayon, P.C.
P.O. Box 398
Austin, TX 78767

EXAMINER

CONTINO, PAUL F

ART UNIT	PAPER NUMBER
----------	--------------

2114

DATE MAILED: 01/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/086,167

Applicant(s)

GEORGE, SUBIN

Examiner

Paul Contino

Art Unit

2114

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 2 December 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-11 and 29 is/are allowed.
- 6) ☒ Claim(s) 12-14 and 17-24 is/are rejected.
- 7) ☒ Claim(s) 15,16 and 25-28 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date. _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see page 10 paragraph 2, filed December 2, 2004, with respect to claims 7 and 26-28 have been fully considered and are persuasive. The rejections under 35 U.S.C. Section 112 pertaining to the claims of February 28, 2002, have been withdrawn.

2. Applicant's arguments filed December 2, 2004, regarding the 35 U.S.C. 102(e) rejections on pages 10-11 pertaining to claims 12-14 and 17-24 have been fully considered but they are not persuasive.

Examiner respectfully disagrees with Applicant's remarks regarding inhibiting a read access to a first portion of the storage medium if the first portion's address is listed on a non-read list. Applicant's argument centers around reading of a "marginally defective data site" as disclosed by Schibilla. Examiner interprets the reading of a "marginally defective data site" to occur before the data site is listed on a non-read list (column 6 lines 39-49 and column 7 lines 23-35). A "marginally defective data site" is interpreted as a "soft error" and therefore not listed on a non-read list (column 1 lines 57-67). Once a "marginally defective" site is determined to be a "hard error" the site is then put on a defect list [non-read list] to inhibit further reads to the defective site (column 7 lines 48-64).

Allowable Subject Matter

3. Claims 1-11 and 29 are allowed.

The following is an examiner's statement of reasons for allowance:

Claims 1-11 are allowed in reference to the specific limitation in claim 1: "if said copying is unsuccessful, adding the address of the new portion to the non-read list." When this limitation within claim 1 is read in context with the entirety of claims 1-6, and 8-11, the novelty of the invention is apparent.

Claim 29 is allowed in similar fashion with respect to the referenced limitation in claim 1: "means for listing the second portion on a non-read list if data stored to the first portion is not successfully copied to the second portion." When this limitation is taken in consideration of the whole of claim 29, the novelty of the invention is apparent.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

4. Claims 15-16 and 25-28 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 12-14 and 17-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Schibilla (U.S. Patent 6,384,999).

As in claim 12, Schibilla discloses a storage medium comprising a plurality of portions, wherein each portion is identified by an address (Fig. 1 and 2; abstract; column 5 line 23 through column 6 line 15);

an access mechanism configured to access data stored on the storage medium (Fig. 1; column 5 lines 30-39);

a controller coupled to control the access mechanism, wherein the controller is configured to receive a command to access data at a first address and to responsively control the

Art Unit: 2114

access mechanism to access a first portion of the storage medium (Fig. 1; column 5 lines 25, 35-39);

wherein the controller is configured to inhibit read access to the first portion if the first portion's address is listed on a non-read list (Fig. 1 and Fig. 3; column 5 lines 35-39, column 6 lines 38-49. Schibilla discloses detecting a "marginally defective data site" (first portion) and further determining if the data site is still able to be read from successfully. It is implied that read access to the data site is inhibited during this process, and is "listed" internally to allow for Schibilla's method of data site reliability testing.);

wherein the controller is configured to remove the first portion's address from the non-read list in response to a successful write to the first portion (Fig. 3 #96 column 7 lines 48-53. Upon Schibilla's successful rewriting to a marginally defective data site, the data site is no longer considered as erroneous.).

As in claim 13, Schibilla discloses wherein the non-read list is stored on the storage medium (Fig. 1, 2; column 5 line 40 through column 6 line 28. Plurality of storage devices as disclosed by Schibilla is used to store information about his marginally defective data sites which implies storage of "non-read list.").

As in claim 14, Schibilla discloses wherein the storage device is a hard drive, and wherein the first portion is a first sector of a hard disk platter (Fig. 1; column 5 lines 23-25, 40-45, column 5 line 65 through column 6 line 5, column 6 lines 39-42).

As in claim 17, Schibilla discloses wherein the controller is configured to generate an error indication in response to inhibiting read access to the first portion (Fig. 3 #97; column 7 lines 54-57. Schibilla clearly indicates a response to an error with his disclosure of the events following an unsuccessful data site recovery.).

As in claim 18, Schibilla discloses a host computer system including a memory and a processor (column 5 lines 26-32);

a storage array coupled to the host computer system, wherein the storage array includes a plurality of storage devices, wherein a first storage device of the plurality of storage devices has a non-read list (Fig. 1 and 2; column 5 line 40 through column 6 line 28. Plurality of storage devices as disclosed by Schibilla is used to store information about his marginally defective data sites which implies storage of “non-read list.”);

a controller coupled to manage the non-read list (Fig.1; column 5 lines 25 30);

wherein an application program stored in the memory and executed by the processor is configured to generate a read command to read data from a first portion of a storage medium included in the first storage device (column 5 lines 26-30, column 6 lines 41-49, column 9 lines 65-76);

wherein if an address of the first portion is listed on the non-read list, the controller is configured to inhibit performance of the read command, wherein the controller is configured to remove the address of the first portion from the non-read list in response to a successful write to the first portion (Fig. 1 and Fig. 3; column 5 lines 35-39, column 6 lines 38-49. Schibilla discloses detecting a “marginally defective data site” (first portion) and further determining if the

Art Unit: 2114

data site is still able to be read from successfully. It is implied that read access to the data site is inhibited during this process, and is “listed” internally to allow for Schibilla’s method of data site reliability testing; Fig. 3 #96 column 7 lines 48-53; column 10 lines 17-27. Upon Schibilla’s successful rewriting to a marginally defective data site, the data site is no longer considered as erroneous.)

As in claim 19, Schibilla discloses wherein the controller is configured to generate an error indication in response to inhibiting performance of the read command (Fig. 3 #97; column 7 lines 54-57. Schibilla clearly indicates a response to an error with his disclosure of the events following an unsuccessful data site recovery.).

As in claim 20, Schibilla discloses wherein the non-read list is stored on the storage medium (Fig. 1 and 2; column 5 line 40 through column 6 line 28. Plurality of storage devices as disclosed by Schibilla is used to store information about his marginally defective data sites which implies storage of “non-read list.”).

As in claim 21, Schibilla discloses wherein the controller is included in a storage device controller included in the first storage device (Fig. 1 #32; column 5 lines 25-35. Schibilla discloses a “control system” (storage device controller) which includes a controller for the HDA (storage device).).

As in claim 22, Schibilla discloses wherein the controller is included in an array controller coupled between the host computer system and the storage array (Fig. 1 #32 and #46; column 5 lines 25-50).

As in claim 23, Schibilla discloses wherein the controller is implemented in program instructions stored in the memory and executed by the processor (column 5 lines 37-40).

As in claim 24, wherein the storage device is a hard drive, and wherein the first portion is a first sector of a hard disk platter (Fig. 1; column 5 lines 23-25, 40-45, column 5 line 65 through column 6 line 5, column 6 lines 39-42).

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

Art Unit: 2114


however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Contino whose telephone number is (571) 272-3657. The examiner can normally be reached on Monday-Friday 7:30 am - 5:00 pm, first Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Beausoliel can be reached on (571) 272-3645. The fax phone number for the organization where this application or proceeding is assigned is 571-273-3657.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PFC
January 11, 2005



SCOTT BADERMAN
PRIMARY EXAMINER